An introduction to the herpetofauna of Antigua, Barbuda and Redonda, with some conservation recommendations

Jennifer C. Daltry
Fauna & Flora International, Great Eastern House, Tenison Road, Cambridge CB1 2TT, United Kingdom
e-mail: jenny.daltry@fauna-flora.org

Abstract. At least 29 reptiles and amphibians have been documented on Antigua, Barbuda and Redonda, of which 21 are probably native. These include four species of marine turtles, two of which (*Eretmochelys imbricata* and *Chelonia mydas*) are known to nest on the nation’s numerous sandy beaches and forage in nearshore waters. The low-lying and largely sedimentary islands of Antigua (280 km²) and Barbuda (161 km²) formed a single island as recently as 12,000 years ago and exhibit a similar herpetofauna with high endemicity. At least four terrestrial species are endemic to the Antigua and Barbuda bank: *Alsophis antiguae*, *Ameiva griswoldi*, *Anolis wattsi*, *Sphaerodactylus elegantulus* (a possible fifth being Barbuda’s *Anolis forresti*, if not synonymous with *A. wattsi*), and a further five are Lesser Antillean endemics. Only six species have been documented on the small, rugged volcanic island of Redonda (1 km²), but as many as half of them occur nowhere else (*Ameiva atrata*, *Anolis nubilus*, and a potentially new *Sphaerodactylus* sp.). Centuries of forest clearance, overgrazing and development, coupled with the introduction of small Asian mongooses (*Herpestes javanicus*), black rats (*Rattus rattus*) and other alien invasive species, has endangered many of the nation’s wildlife, and at least four indigenous reptiles have been extirpated (*Boa constrictor*, *Clelia clelia*, *Iguana delicatissima*, and *Leiocephalus cuneus*). Recent moves to enlarge the nation’s protected area network are encouraging, but need to be supported with stronger legislation and proper investment in management staff and resources. This paper presents conservation recommendations and describes two projects that have adopted innovative approaches to save the most critically endangered reptiles — the Jumby Bay Hawksbill Project and the Antiguan Racer Conservation Project.

Key words: *Alsophis antiguae*; Antigua; Antiguan Racer Conservation Project; Barbuda; invasive species; Jumby Bay Hawksbill Project; marine turtles; mongoose; rats.

Introduction

Ecology and biogeography

Situated near the centre of the Lesser Antillean Archipelago, the nation of Antigua and Barbuda comprises the islands of the Antigua Bank (Antigua, 280 km² and
Barbuda, 161 km$^2$) and the uninhabited volcanic island of Redonda (approximately 1 km$^2$).

Antigua (fig. 1), at 17°10′N, 61°55′W, is geologically and biologically the most diverse of the three main islands, with flat and scrubby plains giving rise to gently rolling limestone hills in the north and to higher volcanic hills in the south (maximum height 402 m, Boggy Peak). Its coastline is deeply indented with, as the local saying goes, “one beach for every day of the year”, together with numerous fringing coral reefs and shoals. Scant natural vegetation remains, with the best examples around Ayers Creek, Half Moon Bay, Nonsuch Bay and on the small offshore islands strewn along the northeast and east coast. Wallings Forest, a small area of secondary moist evergreen forest, has been protected by law since 1912 and is regenerating well. Though this is a relatively dry island, averaging only 1,050 mm rainfall per year, there is considerable variation in rainfall between years and between different parts of the island (TAC, 2005). Like Barbuda and Redonda, Antigua lacks rivers and is frequently subject to severe droughts.

Barbuda (fig. 2; 17°35′N, 61°48′W) is one of the lowest-lying inhabited islands in the Caribbean, with ‘The Highlands’ reaching no more than 39 m above sea level. It is also one of the driest, with rainfall averaging between 750 mm and 900 mm per annum (TAC, 2005). A scrubby coralline limestone island, Barbuda is more uniform in appearance than Antigua and is mostly covered in limestone and sand, including a well developed dune system. The island’s most notable geographic feature is Codrington Lagoon, the largest lagoon in the Eastern Caribbean, running along most of its western flank. Barbuda and Antigua are 43 km apart, but share the same shallow Antigua Bank and would have formed a single large island during periods of reduced sea level in the past (most recently approximately 12,000 years ago). This shared history accounts for their very similar native herpetofauna.